

## ABSTRACT

In one embodiment, a method for deterministic registration for communication networks comprises transmitting a node register command over a network, the node register command comprising a first plurality of bits and a second plurality of bits, the first and second plurality of bits addressing a range of nodes that should respond to the node register command, and a plurality of time slot delays, during each of the plurality of time slot delays, listening to the network for a response from a node in the range of nodes, the node determined by each of the plurality of time slot delays, and responsive to detecting a response, determining a responding node corresponding to the response and designating the responding node as registered.